A complete listing of all claims in this application is set forth below.

In the Claims

A complete listing of all claims in this application is set forth below.

(Previously presented) 1. A probe for bi-directional optical communication with a device external to the probe, the probe comprising:

an optical transmitter for mounting in proximity to an external device, the optical transmitter including a high intensity light emitting diode (LED) that generates light pulses in accordance with a data signal; and

an optical receiver for mounting in proximity to the external device, the optical receiver for generating an electrical data signal from a visible light data signal impinging upon the optical receiver.

(Original) 2. The probe of claim 1, wherein the high intensity LED generates light that is more intense than the light generated by an indicator light of an appliance.

(Original) 3. The probe of claim 2, wherein the high intensity LED generates light that is more intense than a standard LED.

(Original) 4. The probe of claim 2, wherein the high intensity LED generates light that is in the range of approximately 8000 millicandelas to approximately 31,000 millicandelas.

(Original) 5. The probe of claim 1, the optical receiver further comprising:

a sensitive phototransistor for generating the electrical data signal.

(Previously presented) 6. The probe of claim 5, wherein the sensitive phototransistor generates a collector photo current of approximately 5 to approximately 15 mA in response to a visible light pulse of approximately 100 lx.

(Previously presented) 7. A probe for bi-directional optical communication with a device external to the probe, the probe comprising:

an optical transmitter for mounting in close proximity to an external device, the optical transmitter for generating light pulses in accordance with a data signal; and

an optical receiver for mounting in close proximity to the external device, the optical receiver including a sensitive phototransistor for generating an electrical data signal from a visible light data signal impinging upon the optical receiver.

(Previously presented) 8. The probe of claim 7, wherein the sensitive phototransistor is stimulated to generate current in response to light in the range of approximately 10 to approximately 30 lx.

(Original) 9. The probe of claim 7, the optical transmitter further comprising:

a high intensity light emitting diode (LED).

(Original) 10. The probe of claim 9, wherein the high intensity LED generates light that is more intense than a standard LED.

(Previously presented) 11. The probe of claim 10, wherein the high intensity LED generates visible light that is more intense than the visible light generated by an indicator light of an appliance.

(Previously presented) 12. The probe of claim 10, wherein the high intensity LED generates visible light that is in the range of approximately 8,000 to approximately 31,000 millicandelas.

(Previously presented) 13. A method for bi-directional optical communication with a device external to the probe, the method comprising:

generating high intensity light pulses in accordance with a data signal from a diagnostic tool; and

generating an electrical data signal from a visible light data signal.

(Previously presented) 14. The probe of claim 13, wherein the high intensity light signal is more intense than the visible light generated by an indicator light of an appliance.

(Previously presented) 15. The probe of claim 14, wherein the high intensity light signal is more intense than visible light produced by a standard LED.

(Previously presented) 16. The probe of claim 14, wherein the high intensity visible light is in the range of approximately 8,000 millicandelas to approximately 31,000 millicandelas.

(Previously presented) 17. The method of claim 13, the electrical data signal generation further comprising:

generating the electrical data signal in response to a visible light data signal in the range of approximately 10 to approximately 30 lx.

(Previously presented) 18. The method of claim 13, the electrical data signal generation further comprising:

generating current in the range of approximately 5 to approximately 15 mA for the electrical signal generation in response to a visible light data signal of approximately 100 lx.